

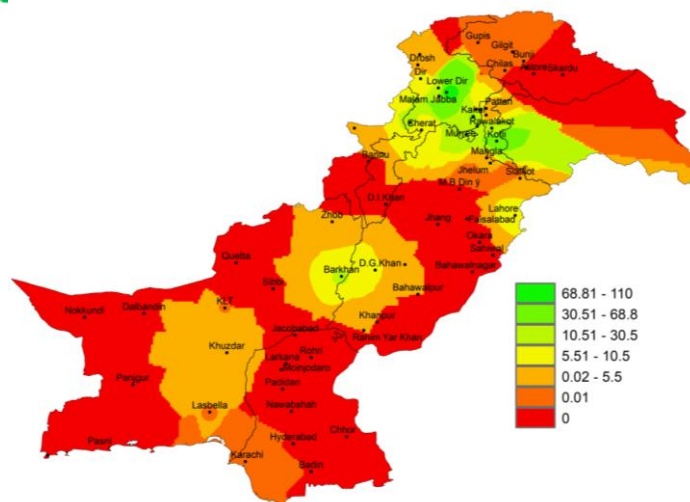
Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the Previous
Week (27th August to 2nd September, 2018)**



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Highlights of Past Weather (27th August to 2nd September, 2018)

Above normal day temperature was observed all over the country.

Province wise distribution of rainfall reported as follows:

- Moderate to heavy rainfall observed in Khyber Pakhtunkhwa during the previous week.
- Light to moderate rainfall observed in Punjab, Gilgit-Baltistan and Azad Jammu & Kashmir during the previous week.
- Light rainfall observed in Baluchistan and Sindh during the previous week.

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Editor-in-Chief: Asma Jawad Hashmi (Director)

Editor: Saeeda Saleh (Assistant Meteorologist)

Past Weather of Provinces (27th August to 2nd September, 2018)**Punjab**

Light to moderate rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 37.2°C & 26.8°C respectively. For the recent week on average 189.1 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 64% and wind speed in the morning/evening recorded as 2.4/3.1 Knots. During the previous week the highest amount of rainfall was recorded as 20.6 mm at Murree & highest maximum temperature was recorded as 45.0°C at Bhakkar.

Sindh

Light rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 37.0°C & 25.6°C respectively. For the recent week, on average 183.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 64% and wind speed in the morning/evening recorded as 4.2/5.5 Knots. During the previous week the highest amount of rainfall was recorded as 0.01mm (trace) at Karachi & highest maximum temperature was recorded as 42.5°C at Rohri.

Khyber Pakhtunkhwa

Moderate to heavy rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 34.1°C & 20.5°C respectively. For the recent week on average 159.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 61% and wind speed in the morning/evening recorded as 0.7/3.0 Knots. During the previous week the highest amount of rainfall was recorded as 110 mm at Malam Jabba & highest

maximum temperature was recorded as 41.5°C at D. I. Khan.

Baluchistan

Light rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 35.7°C & 22.4°C respectively. For the recent week on average 168.3 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 48% and wind speed in the morning/evening recorded as 2.1/5.7 Knots. During the previous week the highest amount of rainfall was recorded as 11.01 mm Barkhan & highest maximum temperature was recorded as 43.5°C at Sibbi.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall observed in Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 33.1°C & 18.9°C respectively. For the recent week on average 139.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 51% and wind speed in the morning/evening recorded as 1.0/2.1 Knots. During the previous week the highest amount of rainfall was recorded as 59.4 mm at Kotli & highest maximum temperature was recorded as 41.5°C at Chilas.

Past Weather for Major Agricultural Plains (27th August to 2nd September, 2018)

Rawalpindi (Potohar region)

Rainfall reported as 6.00 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 2.7/2.1 Oktas while, average relative humidity observed as 71%. Mean day time temperature recorded as 35.7°C & for the recent week 175.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.4 Knots.

Faisalabad (Central Punjab)

Dry weather reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 0.0/0.7 Oktas while, while, average relative humidity observed as 57%. Mean day time temperature recorded as 38.8°C & for the recent week 198.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.2/1.1 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness recorded in the morning/evening as 2.3/1.7 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded as 36.0°C & for the recent week 173.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.7/4.9 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 0.8/0.2 Oktas while, average relative humidity observed as 73%. Mean day time temperature recorded as 39.1°C & for the recent week 197.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.2/2.9 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 2.7/3.1 Oktas while, average relative humidity observed as 23%. Mean day time

temperature recorded as 33.6°C & for the recent week 144.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.2/2.4 Knots.

Past Weather for Sub-Regional Agricultural Plains (20th August to 26th August, 2018)

Multan

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 1.6/1.6 Oktas while, average relative humidity observed as 56%. Mean day time temperature recorded as 37.8°C & for the recent week 197.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 8.9/9.1 Knots.

Lahore

Rainfall reported as 10.21 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 1.0/4.0 Oktas while, average relative humidity observed as 61%. Mean day time temperature recorded as 35.5°C & for the recent week 181.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening 2.0/2.0 Knots.

Zhob

Dry weather reported from during the week; however, cloudiness in the morning/evening recorded as 0.0/0.9 Oktas while, average relative humidity observed as 44%. Mean day time temperature recorded as 36.4°C & for the recent week 175.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/6.1 Knots.

Murree

Rainfall reported as 20.60 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 2.3/4.7 Oktas while, average relative humidity observed as 78%. Mean day time temperature recorded as 24.3°C & for the recent week 107.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/0.9 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 0.0/0.7 Oktas while, average relative humidity observed as 64%. Mean day time temperature recorded as 40.4°C & for the recent week 203.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/0.6 Knots.

Peshawar

Rainfall reported as 12.01 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 1.9/3.9 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 36.9°C & for the recent week 185.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/2.3 Knots.

Kalam

Dry weather reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 0.0/2.4 Oktas while, average relative humidity observed as 56%. Mean day time temperature recorded as 27.6°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.6 Knots.

Gilgit

Rainfall reported as 0.01 mm (trace) from Gilgit during the week; However, cloudiness in the morning/evening recorded as 3.9/5.6 Oktas while, average relative humidity observed as 47%. Mean day time temperature recorded as 34.5°C & for the recent week 148.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/1.4 Knots.

Skardu

Dry weather reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 3.4/5.3 Oktas while, average relative humidity observed as 42%. Mean day time temperature recorded as 32.2°C & for the recent week 127.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.3 Knots.

**Crop Situation for Major Agricultural Plains
(Based on data from Regional Agro met Centers)****Potohar Region (Rawalpindi)**

Presently maize crop is sown in the fields of RAMC Rawalpindi.

Maize; Very Good, Emergence stage.

Central Punjab (Faisalabad)

Presently cotton crop is sown in the fields of RAMC Faisalabad.

Cotton; Very Good, Boll opening stage.

Lower Sindh (Tandojam)

There is presently cotton crop in the fields of RAMC Tandojam.

Cotton (CIM 602); Good, Boll opening stage.

Northern Baluchistan (Quetta)

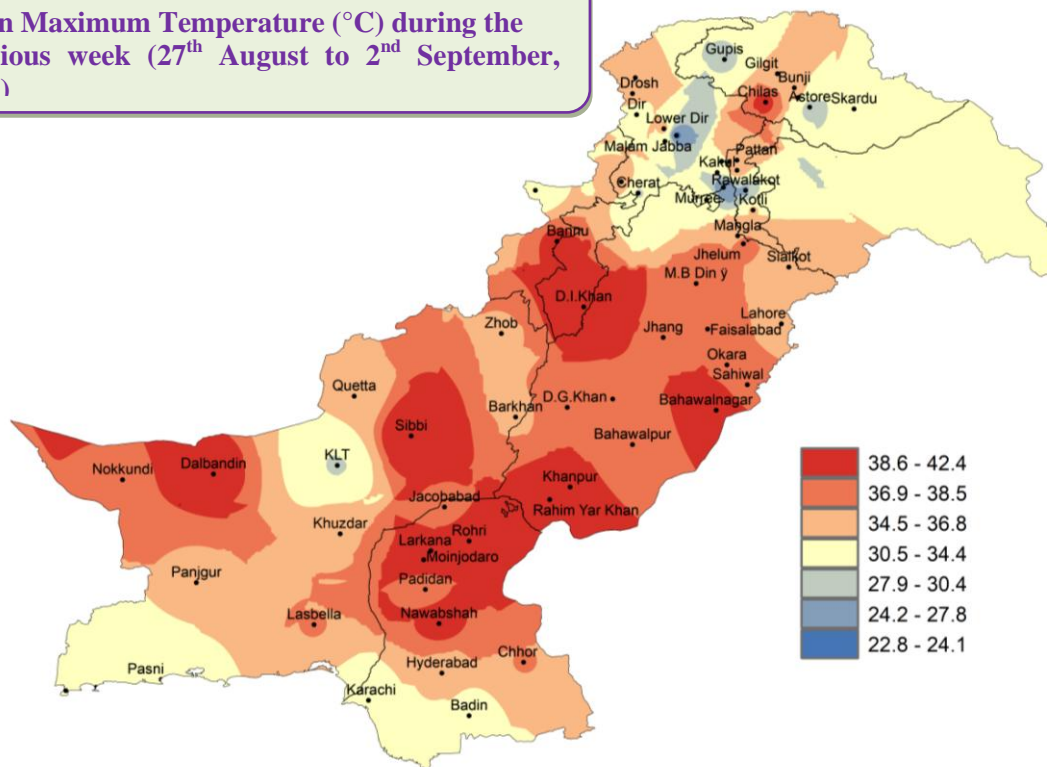
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

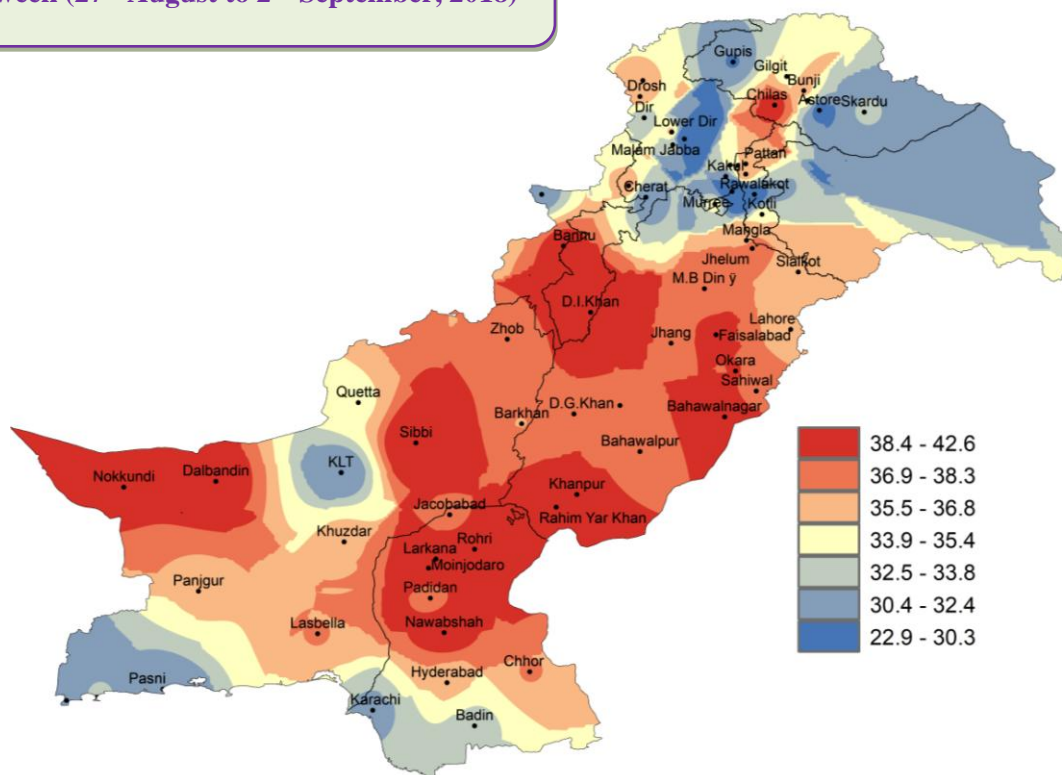
There is presently rice crop in the fields of RAMC Usta Muhammad.

Rice; Tillering stage.

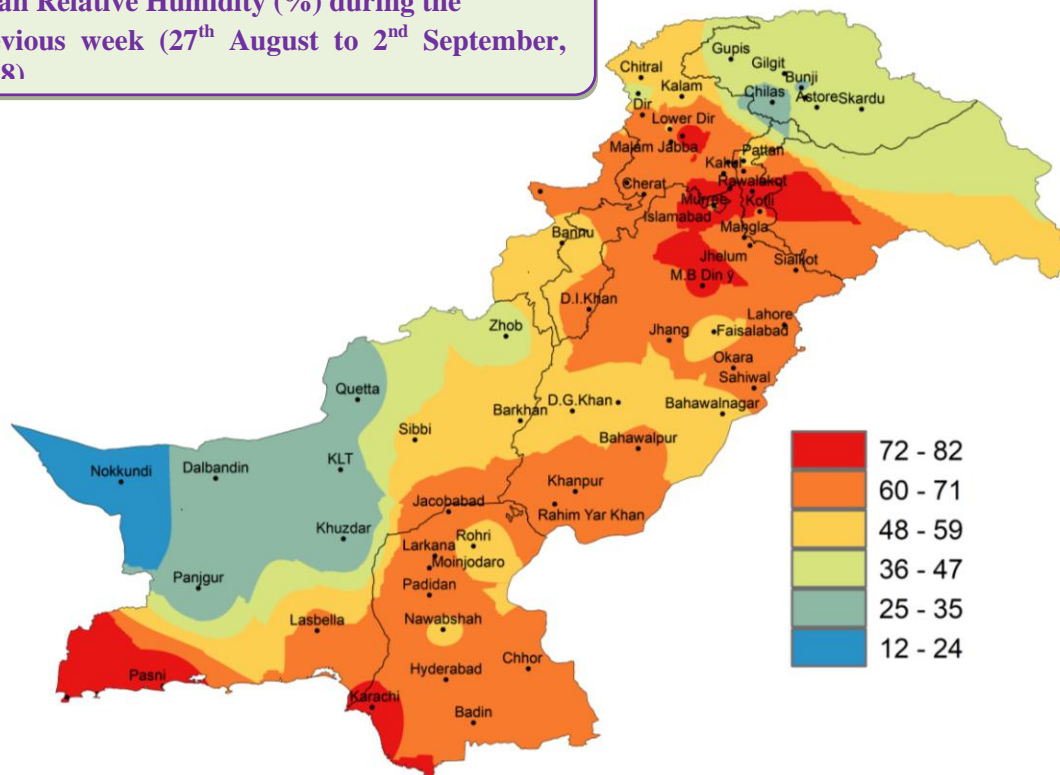
Mean Maximum Temperature ($^{\circ}\text{C}$) during the Previous week (27th August to 2nd September, 2018)



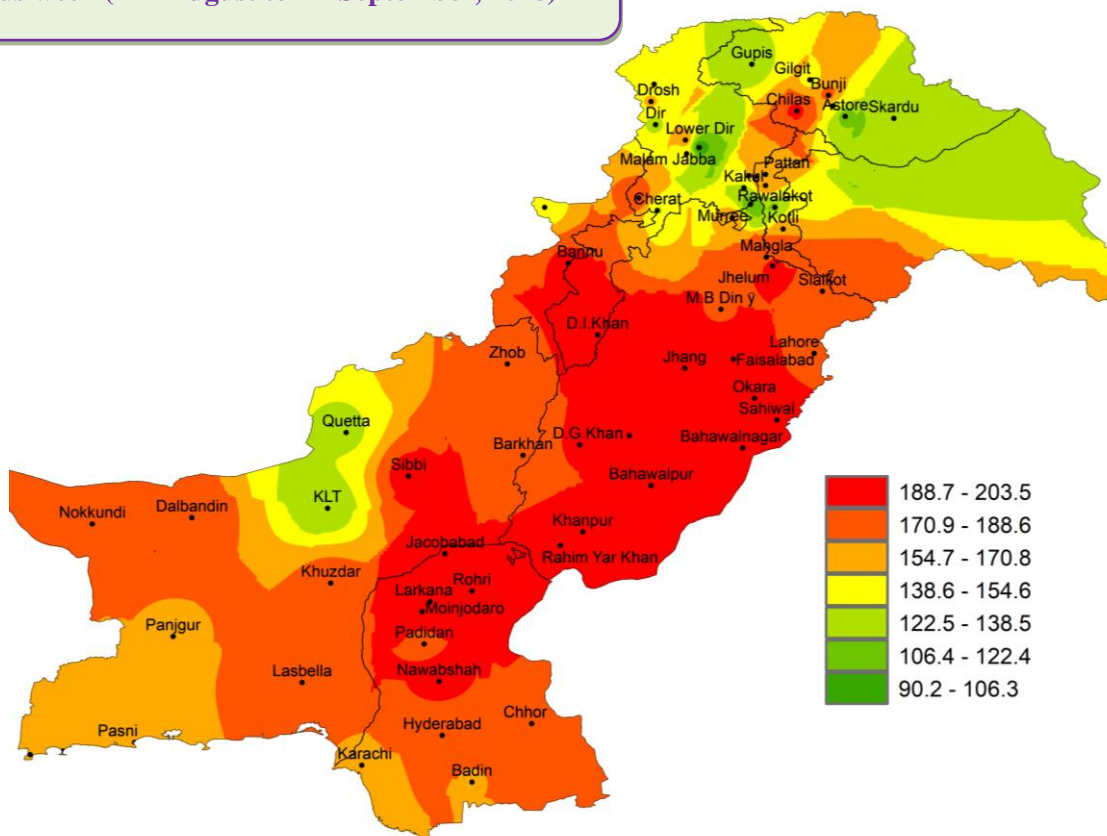
Highest maximum Temperature ($^{\circ}\text{C}$) during the Previous week (27th August to 2nd September, 2018)



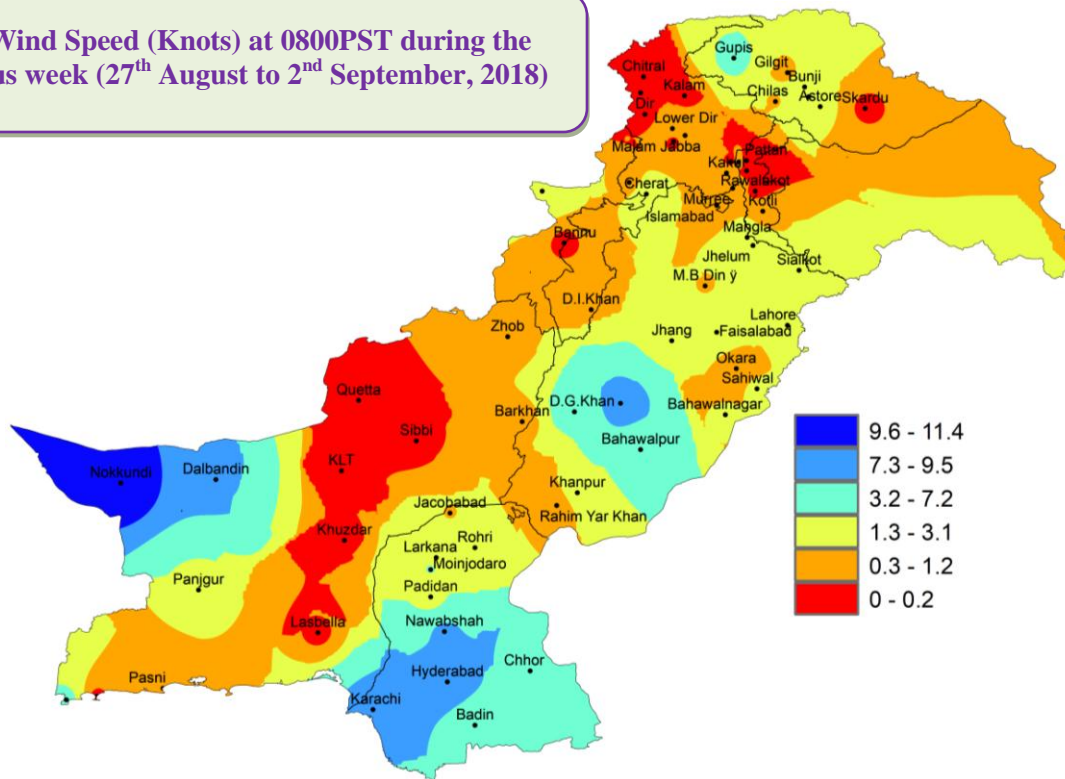
Mean Relative Humidity (%) during the
Previous week (27th August to 2nd September,
2018)



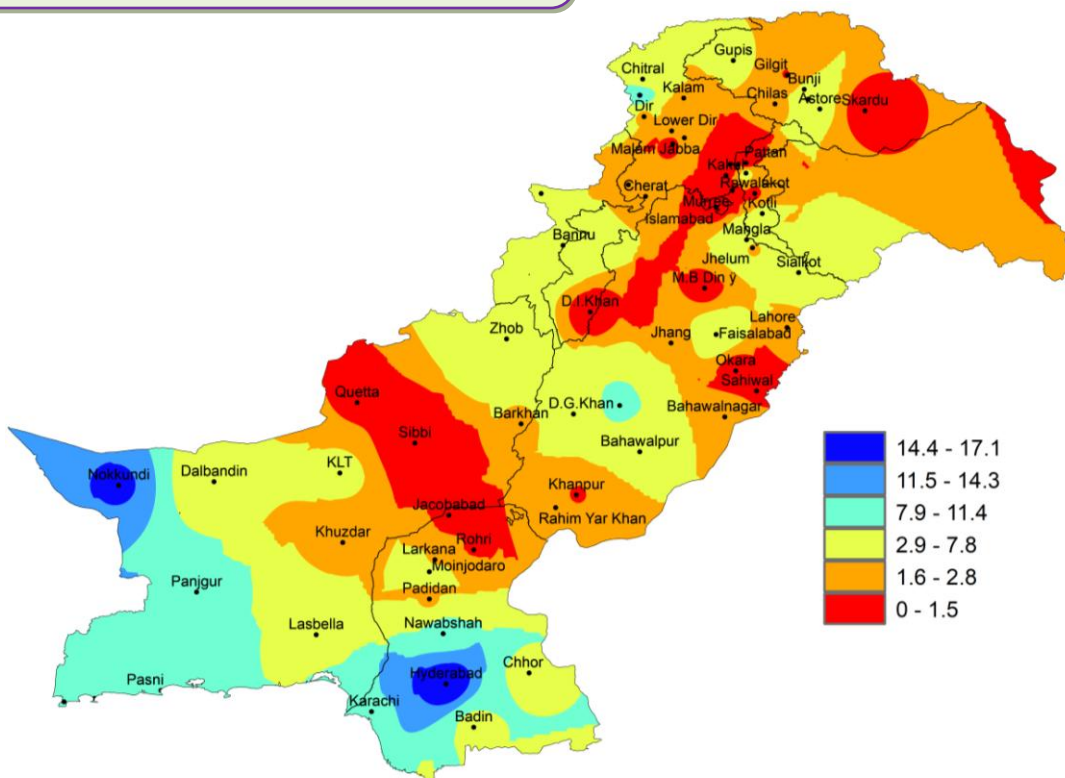
Total Growing Degree Days accumulated during the
Previous week (27th August to 2nd September, 2018)



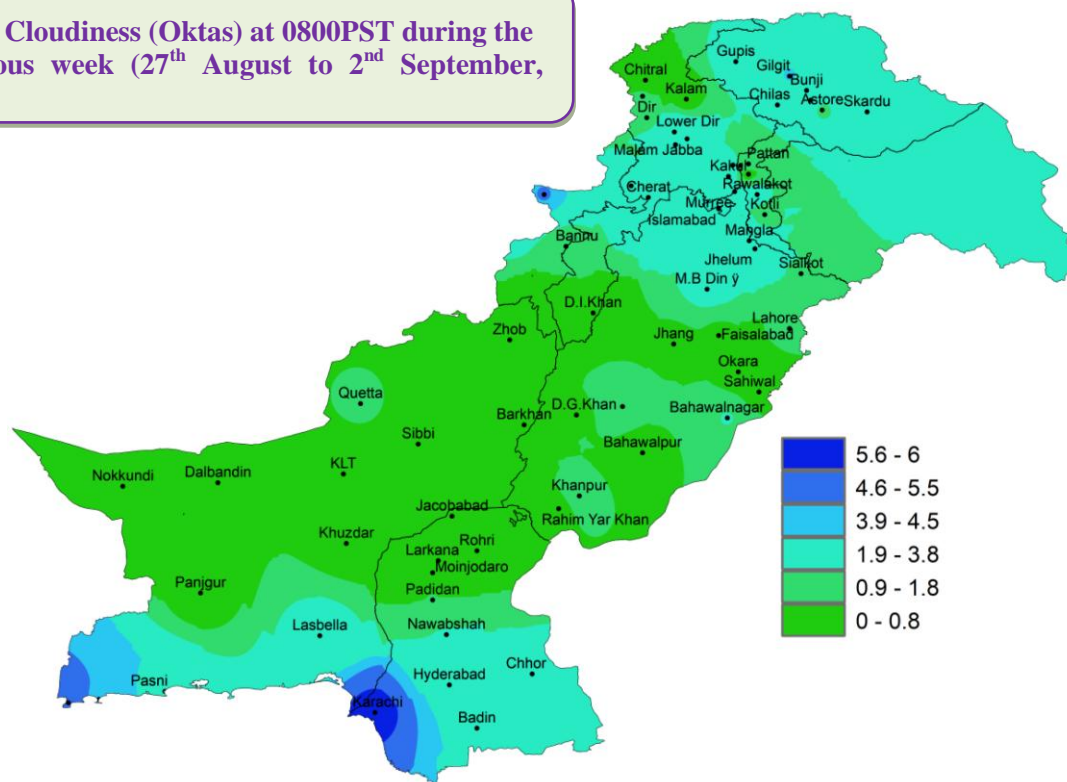
Mean Wind Speed (Knots) at 0800PST during the Previous week (27th August to 2nd September, 2018)



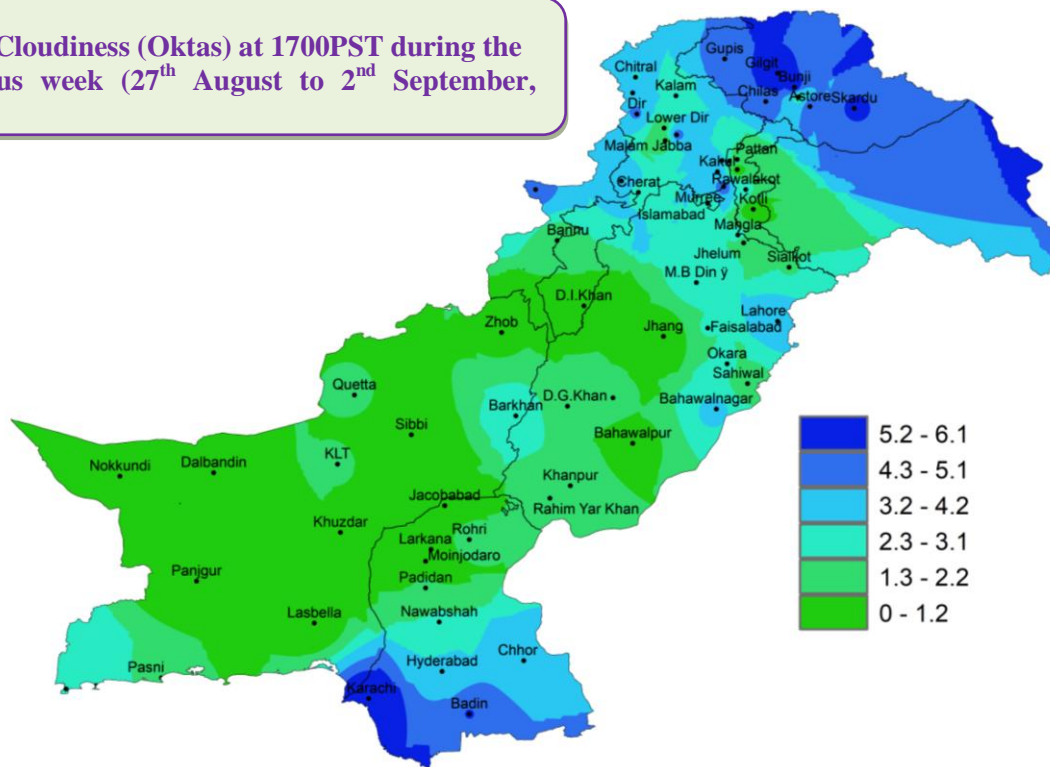
Mean Wind Speed (Knots) at 1700PST during the Previous week (27th August to 2nd September, 2018)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (27th August to 2nd September, 2018)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (27th August to 2nd September, 2018)



Weekly Weather Advisory for Farmers**(3rd September to 9th September, 2018)**

Seasonal low lies over north Balochistan. A westerly wave is present over upper parts of the country.

MONDAY**3-09-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Malakand, Hazara, Peshawar, Kohat, D.I khan, Rawalpindi, Zhob divisions, Islamabad, Kashmir and Gilgit-Baltistan.

TUESDAY**4-09-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at few places in Malakand, D.I khan, D.G.Khan divisions, Kashmir and Gilgit-Baltistan.

WEDNESDAY**5-09-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at few places in Malakand, D.I khan, D.G.Khan divisions, Kashmir and Gilgit-Baltistan.

THURSDAY**6-09-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower is expected at few places in Malakand division, Kashmir and Gilgit-Baltistan.

FRIDAY**7-09-2018.**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at few places in Gujranwala, Lahore, Hazara, Malakand divisions, Kashmir and Gilgit-Baltistan.

SATURDAY**8-09-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at few places in Kashmir and Gilgit-Baltistan.

SUNDAY**9-09-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Hazara, Malakand, Peshawar, Gujranwala, Lahore, Rawalpindi, Mirpukhas divisions, Islamabad, Kashmir and Gilgit-Baltistan.

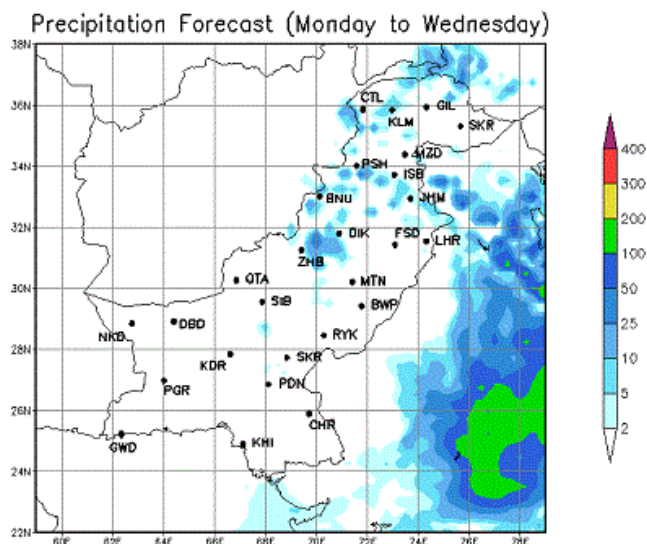
ADVISES FOR FARMERS

During the last week, light to moderate rainfall occurred in upper half of the country while hot and dry weather prevailed in rest parts. This may continue with almost the same pattern in coming days as well. Keeping in view the expected weather conditions following advises are suggested for farming community.

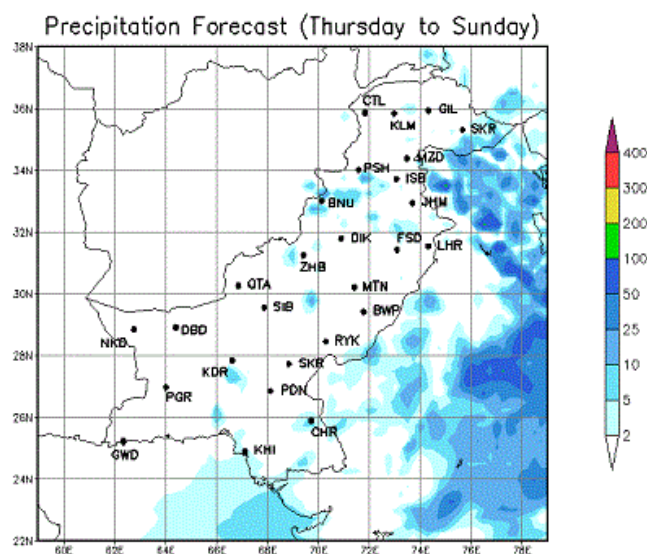
- Use pesticides to avoid the attack from pests on the crops as advised by the agriculture department.
- Use proper precautions during picking of cotton because the cost of good and clean quality cotton is high than that of the filthy one.

Weather Outlook from (3rd September to 9th September, 2018)

The outlook from 3rd September to 5th September, 2018 shows that light rainfall is expected in scattered places of GB & Kashmir, Upper Punjab and KP.



The outlook from 6th September to 9th September, 2018 shows that light to moderate rainfall is expected in scattered places of Azad Jammu & Kashmir, KP, central and central Punjab. However, in isolated places of Baluchistan..



National Weather Data of Selected Cities (Weekly Data from 27th August to 2nd September, 2018)

Stations	Maximum/Night time Temperature (°C)		Growing Degree Days	Relative Humidity (%)	Rainfall (mm)	Cloudiness (Oktas) 0800 PST	Cloudiness (Oktas) 1700 PST	Wind Speed (Knots) 0800 PST	Wind Speed (Knots) 1700 PST
	Mean	highest							
Astore	28.1	28.4	111.5	36	0.00	1.6	4.9	1.7	3.1
Badin	33.0	33.0	169.9	71	0.00	3.4	5.1	4.9	6.3
Bahawalnagar	39.7	39.9	202.3	54	0.00	1.9	3.3	1.3	2.6
Bahawalpur	37.4	37.5	191.2	60	0.00	0.1	0.7	5.7	3.4
Balakot	33.9	34.3	156.1	64	2.20	2.7	3.6	0.0	0.0
Bannu	39.2	39.5	193.6	51	0.00	1.0	1.6	0.0	6.0
Barkhan	36.5	36.8	175.5	55	11.01	0.3	3.0	0.6	2.3
Bunji	36.4	36.6	179.5	31	0.00	3.9	6.1	2.9	2.9
Cherat	30.1	30.2	137.0	69	6.00	3.3	2.9	2.3	2.3
Chhor	36.9	36.9	183.1	64	0.00	2.1	3.7	5.7	6.6
Chilas	39.1	39.2	191.5	26	0.00	2.3	4.7	1.1	2.3
Chitral	35.2	35.4	145.4	54	0.00	0.4	3.0	0.0	4.6
D.I.Khan	40.4	40.8	203.0	64	0.00	0.0	0.7	1.1	0.6
Dalbandin	39.6	39.9	181.8	34	0.00	0.1	0.7	7.9	3.1
DG.Khan	37.7	37.9	190.5	58	6.00	0.6	1.4	4.0	5.1
Dir	32.3	32.4	134.3	67	8.00	1.3	4.3	0.0	1.7
Drosh	36.4	36.6	157.6	36	0.00	0.9	4.1	0.0	12.0
Faisalabad	38.8	40.5	198.9	57	0.00	0.0	0.7	1.2	1.1
Garidopatta	36.0	36.4	168.5	63	2.00	0.6	0.9	0.0	3.7
Gawader	32.8	32.8	164.0	76	0.00	4.4	2.7	0.0	10.6
Gilgit	34.5	34.6	148.0	47	0.01	3.9	5.6	0.9	1.4
Gupis	29.5	30.1	126.0	42	0.00	2.7	4.9	3.7	3.4

Hyderabad	35.7	35.6	175.8	65	0.00	3.3	3.1	9.4	17.1
Islamabad	34.5	34.8	170.0	70	16.00	1.9	2.6	0.3	0.9
Jacobabad	37.5	37.5	189.9	66	0.00	0.0	0.0	1.1	1.1
Jhang	38.1	38.1	195.5	59	0.00	0.4	0.0	1.7	1.7
Jhelum	37.4	37.7	191.8	69	0.00	1.9	2.0	1.1	2.0
Jiwani	30.9	30.8	160.8	77	0.00	4.9	2.3	3.7	8.9
Kakul	30.7	31.0	133.8	68	36.51	2.3	3.4	0.6	1.4
Kalam	27.6	27.8	***	56	0.00	0.0	2.4	0.0	1.6
Kalat	32.0	31.9	167.5	72	0.01	6.0	6.1	8.9	10.9
Karachi	38.5	38.4	192.3	65	0.00	1.1	1.9	2.0	1.4
Khanpur	36.4	36.3	182.3	24	0.60	0.3	1.1	0.0	1.7
Khuzdar	30.1	30.3	124.5	33	0.00	0.0	1.3	0.0	3.4
Kotli	34.7	34.9	170.3	70	59.40	1.1	0.4	0.6	3.4
Lahore	35.5	35.5	181.7	61	10.21	1.0	4.0	2.0	2.0
Larkana	39.1	39.3	197.0	62	0.00	0.7	0.6	3.0	2.4
Lasbella	36.9	36.9	185.9	61	0.00	2.6	0.3	0.0	6.0
Lower Dir	36.2	36.3	171.5	57	5.00	3.6	1.7	0.9	1.7
M.B Din	37.8	38.0	187.2	73	0.00	2.4	2.9	1.1	0.9
Malam Jabba	22.6	22.7	88.8	78	110.00	2.9	4.9	0.6	2.3
Mangla	36.3	36.5	185.3	70	0.01	3.9	2.4	2.3	6.0
Mir Khani	34.6	34.6	148.1	46	0.00	2.3	2.0	1.1	3.9
Moinjodaro	39.0	39.1	189.8	64	0.00	0.0	0.0	3.1	4.0
Multan	37.8	37.8	197.8	56	0.00	1.6	1.6	8.9	9.1
Murree	24.3	24.4	107.0	78	20.60	2.3	4.7	1.1	0.9
Muzaffarabad	34.7	34.9	158.5	66	18.00	1.0	2.3	0.6	1.7
Nawabshah	39.4	39.6	193.3	56	0.00	1.9	2.4	7.7	10.6

Nokkundi	38.4	38.6	183.3	12	0.00	0.0	0.0	11.4	14.9
Okara	38.3	38.3	196.4	63	0.00	0.3	2.3	0.3	0.6
Padidan	37.9	37.8	186.5	68	0.00	0.9	1.6	2.0	2.0
Panjgur	35.9	35.8	167.0	25	0.00	0.0	0.0	1.7	10.6
Parachinar	31.2	31.1	144.5	66	0.00	4.6	4.7	3.0	3.0
Pasni	31.4	31.3	159.8	80	0.00	3.3	1.9	0.7	9.6
Pattan	36.4	36.8	168.5	52	0.00	1.1	1.4	0.0	0.0
Peshawar	36.9	37.1	185.8	68	12.01	1.9	3.9	0.6	2.3
Quetta	33.6	34.5	144.7	23	0.00	2.7	3.1	2.2	2.4
R.Y.Khan	40.1	40.3	197.5	64	0.00	0.6	1.4	0.3	1.9
Rawalakot	27.4	27.4	120.3	82	15.20	2.4	2.6	0.0	1.1
Rawalpindi	35.7	38.0	175.0	71.0	6.0	2.7	2.1	0.3	1.4
Rohri	40.2	40.4	192.5	54	0.00	0.4	1.7	2.0	1.4
Sahiwal	37.8	37.7	195.7	62	0.00	0.4	1.7	1.4	1.4
Saidu Sharif	33.8	34.0	148.3	64	17.00	2.1	1.4	0.0	1.1
Sialkot	35.5	35.6	186.2	69	0.01	1.6	2.1	2.9	4.9
Sibbi	42.4	42.6	198.8	51	0.00	0.0	0.0	0.0	0.0
Skardu	32.2	32.6	127.2	42	0.00	3.4	5.3	0.0	0.3
Tandojam	36.0	38.0	173.0	70.0	0.0	2.3	1.7	3.7	4.9
Zhob	39.1	39.5	197.8	73.0	0.0	0.8	0.2	2.2	2.9
Usta.M	36.4	36.8	175.5	44	0.00	0.0	0.9	0.7	6.1

*** Shows that data was not available.

Findings of AgMIP Pakistan, University of Agriculture, Faisalabad

1. There would be significant increase in temperature i.e., 2.8°C in day and 2.2°C in the night during mid-century (2040-2069).
2. There would be significant variability in rainfall patterns (about 25% increase in summer & 12% decrease in winter during 2040-2069).
3. Climate Change will affect the crop yields negatively (about 17% for rice and 14% for wheat).
4. If there will be no adaptation to Climate Change, majority of farmers would be the economic losers.
5. With Adaptation to Climate Change (through technology and management), there would be significant decrease in poverty and improvement in the livelihood of farming community.

(Agricultural Model Inter-comparison and Improvement Project (AgMIP) Pakistan 2012-2014)

- 1۔ سال 2040-69 کے دوران درجہ حرارت میں قابل ذکر اضافہ ہو سکتا ہے۔ جو کہ دن کے وقت 2.8°C اور رات کو 2.2°C تک ہوگا۔
- 2۔ گرمیوں کی بارش میں 25 فیصد اضافہ اور سردیوں کی بارش میں 12 فیصد تک کمی کا امکان ہے۔
- 3۔ مندرجہ بالا موسمی تغیرات کی وجہ سے دھان کی پیداوار میں 17 فیصد اور گندم کی پیداوار میں 14 فیصد تک کمی ہو سکتی ہے۔
- 4۔ اگر موسمی تغیرات کا مناسب بندوبست نہ کیا گیا۔ تو کسانوں کی اکثریت کو معاشی نقصان کا سامنا کرنا پڑے گا۔
- 5۔ موسمی تغیرات کے سدباب (بذریعہ نئی ٹیکنالوجی کا استعمال اور بہتر نظم و نسق) سے غربت میں کمی اور کسانوں کی زندگی میں خوشحالی لائی جاسکتی ہے۔

(ایگمپ پاکستان 2012-2014)